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Hepatitis contagiosa canis (Rubarth) in Great Britain

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INTRODUCTION

In a paper by Innes (1949a), dealing with canine encephalopathies, some prominence was given to the valuable work of Rubarth (1947); another (1949b), dealt specifically with the inclusion bodies in distemper, contagious hepatitis, fox encephalitis and crystalline structures in normal canine liver cells. It was stated that this contagious hepatitis in dogs had not been described in Britain but that no disease is ever "recognised" until it is "found" in the first place, and how on occasion we have not the eyes to see what is staring us in the face. It was urged that diligent heed should be given to the observations of Rubarth to determine primarily whether this virus infection occurred in this country. It has already been recognised by several workers in the States, Coffin (1948), Riser (1948), (and by Dr. F. Bloom, New York, and Major T. C. Jones, Army Institute of Pathology, Registry of Veterinary Pathology, Washington—private communications).

As a result of previous work in animal pathology a volume of material and data had been collected and catalogued in an orderly manner. It was thus simple to refer to these files and re-examine slides from canine autopsies made many years ago to see if there existed any pathological condition in dogs comparable to Rubarth's disease. A search had been made for intranuclear inclusion bodies in hepatic cells of dogs in 1939 with reference to identifying those which had been found in experimental dogs infected with Green's virus. Unfortunately, when that search was made the hepatitis story had not been unfolded and canine livers showing pathological changes seemed to have been excluded from the series. In the present study more notice was given to autopsy records in which dogs had suffered from a "distemper-like" illness, also to those which showed some liver changes. No attempt was made to make this scrutiny an extensive one through all my records and slides but the sections from some 30 dogs were examined in this category. In this small series hepatic lesions, other changes, and intranuclear inclusions in various tissues were found in three canine cases, comparable in many ways with those described by Rubarth; the disease thus must have existed in 1935 (date of first case) if not many years previous to this. This note is published to stimulate clinical and pathological work by others which would help to clarify important aspects of canine pathology of interest to the dog-breeder, practitioner and pathologist (perhaps medical as well as veterinary).

HEPATITIS CONTAGIOSA CANIS IN SWEDEN

The disease is not new, as Rubarth mentions records of Joest and Cohrs more than 20 years ago and also his indebtedness to original observations of Hjarre in 1928; there is also an important side issue in the suggestion that the same disease might occur in horses. The pathological study was based on 190 autopsies out of a total of 5,610 performed on dogs in Stockholm from 1928-46. Deaths were mainly in young puppies but the disease was not rare in much older dogs. In some animals the acuteness of the condition was striking—the dog being dead before the owners had even noticed the dog was unwell. As a rule the illness was of two to four days' duration, starting with apathy, then loss of appetite and intense thirst; sometimes oedema of head and neck, vomiting, diarrhoea and groaning with pain were evidenced, with fever at the beginning but a subnormal temperature before the end. Nervous symptoms were not unusual and took the form of clonic and tonic spasms: the animal tended perhaps to hide in dark corners. The mucous membranes might be anaemic. The tonsils frequently were swollen and reddened as in acute tonsillitis. Profuse lachrymation and central cloudiness of the cornea was often seen. There was acceleration of heart and respiration rate. No specific urine chemistry was found.

The main *anatomical* lesions were as follows: (1) Subcutaneous tissue in shoulder and belly regions moist or oedematous; (2) generalised icterus rare and faint; (3) enlargement of lymph nodes, varying in different sites in the same and different animals but usually moist, oedematous, and haemorrhagic; (4) peritoneal transudate which might be sanguinous; (5) some enlargement of liver with clear lobulation, dry surface and occasional fibrinous deposits on the surface; (6) subserous oedema of gall bladder; (7) enlarged and diffluent spleen in about 50 per cent. of cases; (8) haemorrhage and oedema of thymus in young puppies; (9) hydrothorax (occasionally) and subpleural haemorrhages; (10) right-sided dilatation of heart, subendocardial haemorrhages and sometimes slight blood-stained pericardial effusion; (11) hyperaemia of brain with occasional punctate haemorrhages.

Histologically the main lesions were: *Liver*: haemosiderosis, dilatation of small vessels, peculiar lacunose ectasia of sinusoids, necrobiotic separation of liver cells with irregular foci of necrosis and incipient leucocytic infiltration; fibrinous perihepatitis and occasional fibrinous thrombi in small vessels; the hepatic nuclei showed varying degrees of regressive change including margination of chromatin; numerous intranuclear inclusion bodies in the hepatic and endothelial cells of the sinusoids, sometimes being acidophil or basophil dependent on methods of fixation and staining; erythrophagy by hepatic cells was often seen; subserous oedema of the gall bladder was found in about 90 per cent. of cases. The primary change was regarded as an action on the sinusoidal endothelium and circulatory system with resultant hyperaemia, haemorrhage, and damage to parenchyma. *Spleen*: the structure of the red pulp was obliterated by a greatly increased blood content, oedema and haemorrhage; similar lesions and necrosis were present in the Malpighian corpuscles; intranuclear inclusion bodies were found in the fixed macrophages and sinusoidal endothelium (*i.e.*, littoral cells). *Lymph nodes*: the severity of the lesions varied in different nodes of the same animal and from case to case, but acute lymph stasis, marked sinus catarrh (*i.e.*, the benign sinus reticulosis of Robb-Smith), hyperaemia, haemorrhages, and inflammatory cell infiltration of capsule and pericapsular tissue were seen most frequently; inclusion bodies were evident in the same situations as in the spleen (also tonsils, bone marrow, and adrenals). *Kidney*: apart from inclusion bodies in the nuclei of the endothelium of the glomerular tuft there was no specific pathology. *Lungs*: hyperaemia and oedema. *Tonsils*: similar lesions to those in the lymph nodes, *i.e.*, an acute inflammatory condition with necrosis, oedema, and haemorrhage of germinal centres all spreading to peritonsillar tissue and with inclusions in vascular endothelium. *Brain*: no lesions of an acute encephalitis, as seen in any of the recognised encephalitides, but oedema and cell infiltration of pia and subpial zones, glial nests, swelling and necrobiotic changes of endothelium of small vessels with inclusions in the latter; no myelin stains were used but there is mention of lytic disintegration of nervous tissue around altered vessels and some degree of perivascular infiltration. Regressive lesions occurred in the hypophysis.

All the clinical and pathological data summarised above are given in great detail by Rubarth and the lesions are amply illustrated; it would be impossible to summarise this in a brief form which would allow for many of the qualifications made by the author in respect of the variations from case to case. It is, however, clear that the complex stands apart from any other febrile infection of dogs when the intricate pattern is assembled. The pathological lesions are characteristic, particularly if attention is directed at the same time to the nature and distribution of the inclusion bodies; there would certainly be little danger of confusing it with distemper—as has been dealt with in the previous paper (1949a). The author compares this condition quite justifiably with experimental shock in dogs, with leptospirosis, with right-sided heart failure and with liver dystrophy associated with some chronic local suppuration such as pyometra. Much experimental work was done to provide evidence for the virus nature of the contagion—which would appear to be undoubted—and also to establish a reliable complement-fixation technique for diagnosis. It is unnecessary to deal with this, or with the well-founded contentions of the author that Green (fox encephalitis) and de Monbreun ("experimental distemper" and encephalitis)

were working with the same contagious and infectious agent. Some comment was passed on this in both other articles (1949 a and b) but the specific pathology described by all (and seen by me in at least one dog infected by Green's virus experimentally) would surely indicate that whatever the virus is, all three workers were concerned with the same disease entity. The name applied hardly matters at this stage but it is important that the disease should be distinguished from distemper. The frequency of the condition in Sweden (and now in the United States) makes its recognition all-important to the practitioner and to experimentalists working with dogs no matter for what purpose (but particularly when experiments are undertaken to investigate other virus diseases of dogs of which there are evidently more than anyone imagined).

The Disease in Great Britain

Thirty autopsy records and available slides were re-examined and out of this three cases of contagious hepatitis were identified. If more time had been available (and if it would have served any useful purpose) no doubt a more extended search would have revealed more. The main idea behind this paper is served by describing these few cases as it will focus more attention on the disorder. (Only brief notes are given in each case; all tissues had been fixed in 10 per cent. formol-saline and sections stained by haemotoxylin-eosin. No elaboration is made of the abstracts from the *post-mortem* protocols made at the time of the autopsies with the exception of some further comments on the liver pathology in the light of Rubarth's findings.)

Case 1.—Cairn. M. Five years. From Cambridge area. 10.9.'35. P.M. dog 135/1935.

Clinical history.—Animal treated at home for eczema of back with calcium sulphide; later passed blood-stained urine; showed jaundice and died after a short illness.

Pathology.—Good condition; large area of necrosed skin left lumbar region; slight icteric tingeing of mucous membranes and subcutaneous tissues; no peritoneal effusion; no enlargement of spleen; no kidney lesions; liver firm, smooth with marked bronze colour and very distinctive lobulation; no pleural effusion; massive pulmonary oedema all lobes apart from apices; right-sided dilatation of heart; slight blood-stained pericardial transudate.

Anatomically there are no findings in this case which are discordant with those of Rubarth and there are many analogous features such as the slight icterus, the bronze colour and distinctive lobulation of the liver, the pulmonary oedema, and the right-sided dilatation of the heart with minor pericardial effusion. Histologically there were no lesions in the kidneys while the lungs merely showed all that was expected from the macroscopic appearance. The liver (Fig. 1) showed many of the changes described by Rubarth, *viz.*, the irregular "shadow necrosis" with incipient leucocytic infiltration, sometimes in association with a central vein; the hepatic cells in the vicinity showed nuclear changes particularly margination of chromatin; there was immense haemosiderotic pigmentation of hepatic and Küpffer cells; the lacunose ectasia of the sinusoids (almost telangiectatic-like in places) was not quite typical: there were fibrinous clots in the sinusoids (Fig. 1); intranuclear inclusion bodies in hepatic and endothelial cells were not numerous but were quite easy to find.

Case 2. Dachshund. Six months M. Cambridge area. 23.4.'36. P.M. 193/36.

Clinical history.—Only that of sudden collapse and death.

Pathology.—Moderate icterus of subcutaneous tissue, mucous membranes and intima of aorta; marked "nutmeg" appearance of liver; thrombosis of a large intestinal artery from near its origin at main root with consequent infarction and gangrene of 2 to 3 in. segment of small intestine; diffuse haemorrhagic condition of intestinal mucosa with bloody ingesta; fatty heart; subendocardial haemorrhages. (No mention is made in the protocol of examination of lymph nodes, marrow, tonsils, brain or spleen, which in effect indicates what occasionally happens in animal autopsy work and how we are often biased in the selection of tissues for histological examination; no doubt in this case, partly influenced by the presence of thrombosis and infarction, I erroneously believed this to be the primary disease; thus sections were only made of intestine, liver and vessels.)

Pathologically there is little in this case which is not in agreement with Rubarth's findings except the thrombosis and infarction; this might be another complexity of the syndrome or might be a coincidental lesion. There was no necrosis in the section of this liver (Fig. 3), at least not like that seen in Case 1; there were many areas, however, in which small groups of liver cells were poorly stained and showed various regressive changes in the nuclei; the outstanding feature was the widespread lacunose dilatation of the sinusoids, with rupture and haemorrhage in places, which, no doubt, was responsible for the "nutmeg" appearance seen macroscopically. Haemosiderosis was also present. Intranuclear inclusions were moderately numerous in both hepatic and endothelial cells but were more prominent in the latter.

Case 3. Greyhound. Four to five months. Manchester area. 29.10.'46. P.M. 30/46.

Clinical history.—This animal had a peculiar history inasmuch as many other dogs in the same kennel had been suffering from a mysterious outbreak of "fits," "paralyses," "screaming," inability to walk, while clinically the disease was said to be non-febrile. The animals were kept in the most deplorable condition and two dogs which were "paralysed" were autopsied and found to be suffering from *florid rickets of a severe classical type*; hence the reason they were unable to walk was because both had greenstick fractures of both femora and distal ends of humeri quite apart from the generalised malacic condition of all bones of the body! The other pathological features of these animals are irrelevant. This case (3) showed no rickets and the bones were as firm and well-grown as those of any normal pup. It had had a very acute illness, and had died.

Pathology.—Moderate emaciation; no effusions; haemorrhagic lymphadenitis; haemorrhagic tonsillitis; haemorrhagic erosion of fundus of stomach; some pulmonary oedema and marked congestion; gross dilatation of right side of heart with flabby musculature; no lesions brains, bones, or joints.

The lesions in this animal are quite different from Cases 1 and 2. Tonsils and lymph nodes (Fig. 4) showed all the features of an acute inflammatory process as described by Rubarth—oedema, congestion, necrobiotic changes, very marked sinus catarrh (cortical and medullary sinuses were packed with macrophages and many laden with blood pigment), marked mononuclear infiltration of capsule and pericapsular tissue; inclusion bodies were found in macrophages and littoral cells of lymph nodes and occasionally in vascular endothelium of the tonsil. The lungs showed intense hyperaemia and oedema. There was no hepatic necrosis as seen in Case 1 but as in Case 2 lacunose ectasia of sinusoids and regressive changes in small isolated groups of hepatic cells were marked while intranuclear inclusions in both hepatic and endothelial cells were found without a great and lengthy search. There were no inclusion bodies (distemper) in the cytoplasm of epithelium covering the nasal mucosa or the turbinate bones; the latter were deeply congested and haemorrhagic. This animal was regarded as typical of the "outbreak" in this kennel, some cases of which were classical rickets; it is manifest there was some infection in other dogs as well which was, in fact, suspected by the practitioner who had sent a carcase for *post-mortem* examination elsewhere in the first place. In some of the dogs symptoms were present which might have been (or might have been mistaken for) hysteria.

Discussion

I believe that Rubarth has described clearly and succinctly a syndrome in dogs in Sweden which, although at one time it might possibly have been confused with distemper clinically, has a characteristic pathology sufficient to differentiate it from any other identified canine disorder. There would be little room for dispute that (*a*) the hepatic lesions, (*b*) the occasional haemorrhagic lymphoadenopathy, (*c*) the subserous oedema of the gall bladder together with (*d*) the intranuclear inclusion bodies in hepatic cells and in fixed macrophages and littoral cells of spleen, marrow, lymph nodes and liver (also vascular endothelium), are all in fact pathognomonic. Many of these features (but not all in any one case) were seen personally at least in one dog infected with Green's virus in 1938 and now from a re-examination of material in three natural canine cases. The fact that each of these showed some different general features is noteworthy but is still in harmony with Rubarth's findings of a great variation in the clinico-pathological complex. In my cases there was an absence of splenic enlargement and of oedema of the gall bladder, but there was a basic commonality in the type of liver damage (with slight jaundice in two) and in the finding in all cases of intranuclear inclusion bodies in hepatic cells, vascular, sinusoidal and lymphvascular endothelium. The virus would thus seem to be unique in having a predilection for endothelium, and all other pathological features might follow as a manifestation of this. This variation in the picture may also indicate how the disease has been confused with other canine diseases cloaked under many "clinical diagnoses"—in none of these three cases recorded was a tentative clinical diagnosis made.

If much of the above is accepted then the disease has existed in Britain at least since 1935, which is also the impression I have gathered about its occurrence in the United States. The apparent frequency with which it has been found in Sweden and more

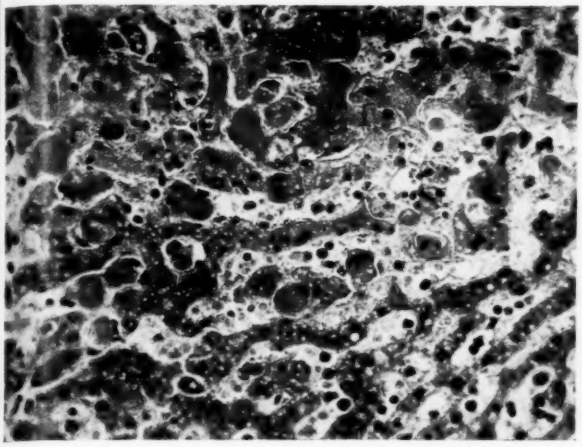

FIG. 1

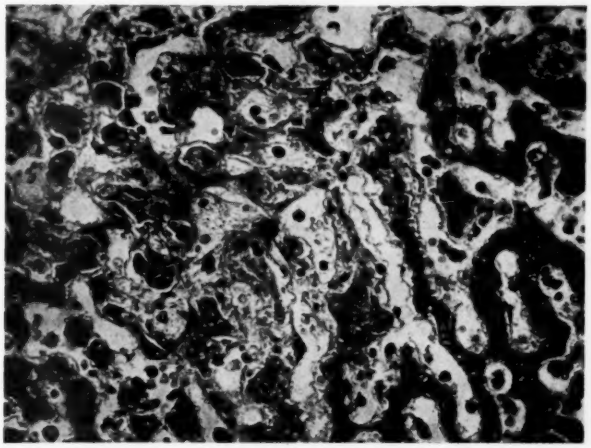

FIG. 2

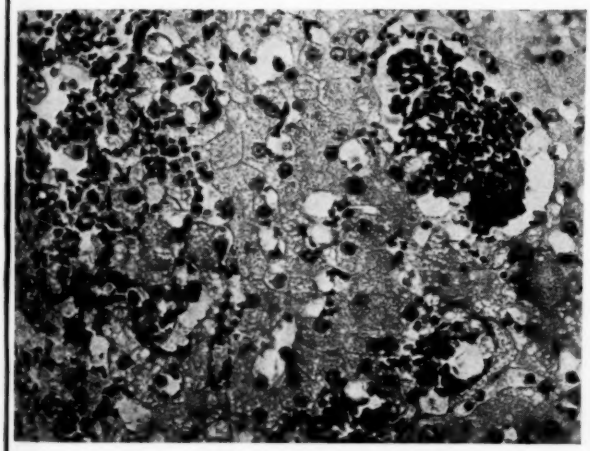

FIG. 3

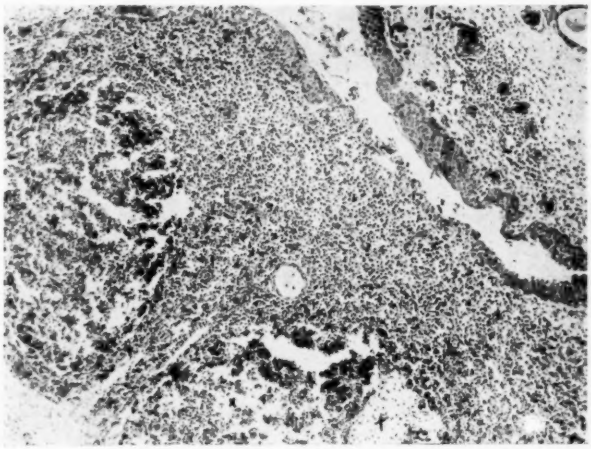

FIG. 4

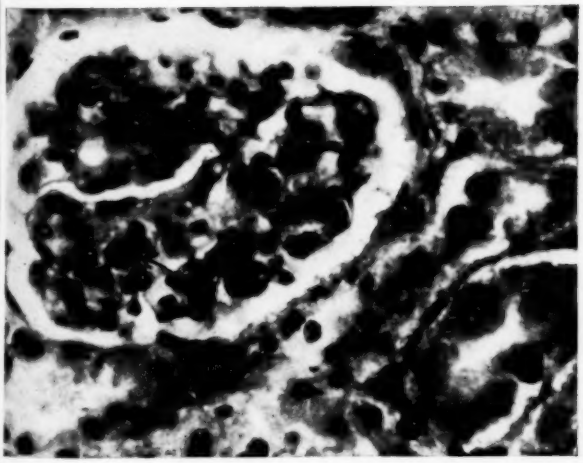

FIG. 5

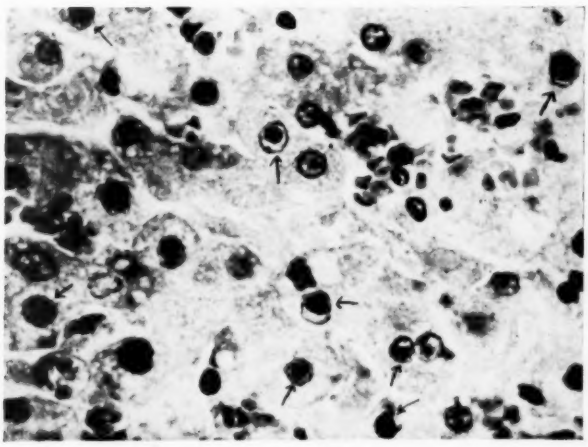

FIG. 6

recently in the United States (see Figs. 5 and 6) together with the ease with which three cases were found in my canine pathological material suggests that it is perhaps a common disease of dogs in many parts of the world (Joest and Cohrs, mentioned by Rubarth, had obviously seen something similar in Germany many years ago). There is certainly much room for needed investigation. It should be kept in mind that there still may be some association of this virus with a form of "canine encephalitis" because of the tendency of the virus to produce vascular lesions in the CNS and as Rubarth says, "lytic disintegration of nervous tissue around." This is said in spite of the fact that I had previously tried to identify the "fox encephalitis virus infection" of Green with "canine encephalitis" in England without being able to link any common pathology.

In conclusion, it remains to be said that identification of these three cases emphasises the value of making, cataloguing and indexing pathological material in such a way that it can be traced and rechecked. One of the greatest needs in veterinary pathology (and I use the word here in its widest sense) in England is for the establishment of a "Bureau," "Registry," "Museum," call it what you will, in which there would reside an enormous bulk of carefully catalogued clinical-pathological protocols of animal diseases complete with slides, photographs, blocks and tissues which could be studied by an interested observer whatever his speciality. It is hoped that a subsequent article will deal with this in more detail, *i.e.*, pathology and its place in veterinary science.

Summary

1. The findings of Rubarth in the identification of a syndrome in dogs, named by him *Hepatitis contagiosa canis*, are briefly reviewed, particular attention being paid to clinical symptoms and pathology.

2. The hepatic lesions of necrosis, lacunose dilation of sinusoids, the haemorrhagic lymphoadenopathy and the specific intranuclear inclusion bodies in various tissues are of pathognomonic importance.

3. Three spontaneous cases in dogs in England have been identified on the basis of pathological findings and some of the lesions are illustrated; the disease thus must have existed in Britain for many years.

4. The need for the clarification of febrile infections of dogs which might be confused with each other is apparent.

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Acknowledgments.—It is a great pleasure to express my indebtedness to Major T. C. Jones, American Veterinary Corps, head of the Registry of Veterinary Pathology, Army Institute of Pathology, Washington, D.C., for enabling me to have the microphotographs taken. I am also indebted to him for permission to use Figs. 5 and 6 illustrating lesions of natural cases he has seen in the United States. He has also examined sections from my three cases and agrees with my conclusions that the liver pathology is comparable to the descriptions of Rubarth and to what he has observed personally.

Note.—The microphotos have been unfortunately reduced by one-third in the reproduction from originals to blocks for publication. The magnifications given in the legends must thus be readjusted by subtraction of one-third.

Fig. 1.—*Hepatitis contagiosa canis.* Liver: Case 1 (P.M. 135/1935). Irregular, fibrinous clots in sinusoids; regressive changes in hepatic cell nuclei with margination of chromatin; some Küpffer cells packed with haemosiderin, not well seen in black and white photographs; irregular dilatation (not typically lacunose) of sinusoids. No inclusions in this field. (AC218444-1.) H.E. × 395.

Fig. 2.—Same case as Fig 1, showing several columns of liver cells with necrosis, disappearance of nuclei and lacunose dilatation of sinusoids. Foci of necrosis were extremely widespread in the section; every field under low power showed some. (AC218444-2.) H.E. × 395.

Fig. 3.—Case 2. (P.M. 195/36). *Liver.* Showing more typical lacunose dilatation of sinusoids as depicted by Rubarth; liver cells faintly stained and some regressive changes in nuclei; a single intranuclear inclusion in hepatic cell present ( ). (AC218444-3.) H.E. × 435.

Distemper and Hard Pad Disease in Dogs

Central Veterinary Society Discussion*

Opening an informal clinical discussion on this subject, Mr. Wright said that, earlier, there was reference to distemper and hard pad disease. Recently he had had a large number of cases confined to a small area; his headquarters were south of the Thames and within a radius of a quarter of a mile he had the disease in ten houses and it seemed like a local endemic. His assistant had some puppies, 12 weeks old, all with definite symptoms of hard pad disease. He did not know whether there was any source of infection—whether it was carried by the pads or not—but on one side of the Thames he had a glut and on the other side none at all.

Mr. Bateman: Did it occur in any distemper-immune dogs?

Mr. Wright: It was mostly in a residential district and mostly in young dogs known not to have had distemper or preventive inoculation.

Miss Uvarov: She had had a few cases and some had been inoculated with the vaccine virus; several recovered with general treatment. Early diagnosis, however, was essential, when large doses of anti-distemper serum were of help.

Mr. Wright: With typical distemper 20 or 30 years ago there were a number of cases with hard pad. At that time it was thought the condition was due to the dog not walking about and using the pads; it was not regarded as a separate disease. There were also cases where the nose was hard, dry and crusty and remained almost a warty nose; he did not remember seeing any hard noses like hard pads; hard pads were very smooth, but hard noses were cauliflower-like.

Mr. Hodgman: He thought we were making a mistake in calling the condition "hard pad" disease, as he personally had some cases which had subsequently been confirmed in which there was no evidence of hard pad. He was also of the opinion that a far more constant symptom was a tonsillitis. He had heard the term "para distemper" applied and preferred it to "hard pad," but he was afraid that the latter name had now caught on.

Mr. Harvey Clarke supported Mr. Hodgman. He did not agree that the symptom of hard pads was completely diagnostic. Probably in the majority of cases of encephalitis the symptom of hard pads did not occur; if it did occur it was at a late stage and by the time they became hard, treatment was of no avail. What they wanted was early data to enable them to diagnose between this disease and distemper. He had come to the conclusion that the pad became hardened after the condition had been in existence for a fortnight or three weeks and that it hardened very quickly in 24 hours: the first thing one noticed was slight swelling of the pad. He contended that in the majority of cases the pad did not get hard but remained soft and he was certain they were dealing with encephalitis.

Miss Uvarov: She would like to know if Mr. Clarke noticed the temperature and whether those which developed hard pad ran a higher temperature than those with so-called distemper.

Mr. Clarke: He had not noticed that the temperature fluctuated a great deal—it was from 100° to 104° F.—not that it was much higher at the time the pads became hard, but probably in the initial stages it was considerably higher.

Miss Uvarov: In early cases she found the temperature was 105° to 106° F. before hard pad developed while with a temperature of 102·8° F. to 103° the condition took some time to develop.

Mr. Hodgman: Where a dog, young or old, was brought to him suffering from tonsillitis, he always had a feeling at the back of his mind that the case might not be one of simple tonsillitis: he feared it might be the forerunner of hard pad disease, and this often turned out to be the case. At one time he treated such

* October 8th, 1948.

Fig. 4.—Case 3. (P.M. 30/46.) *Tonsil.* Showing no break in continuity of epithelium in crypt, *i.e.*, inflammation is not ulcerative; marked hyperaemia, oedema (x) and some breakdown of germ centres; small centres of necrobiosis; inclusion bodies present in vascular endothelium but not visible at this magnification. (AC218443.) H.E. × 90.

Fig. 5.—*Kidney.* Natural case U.S.A. Glomerular tuft showing large intranuclear inclusion body in endothelium of capillary ( ). (Army Inst. Path. Neg. No. Acc 201966.) H.E. × 805.

Fig. 6.—*Liver.* Same case as Fig. 5, dog, U.S.A. Showing four intranuclear inclusion bodies in hepatic and endothelial cells (Army Inst. Path. Neg. No. Acc 201966). Compare with Fig. 3, with Rubarth's Figs. and also Fig. 2, Innes (1949b). In none of my cases were inclusion bodies as numerous as in this picture but this is not unusual. H.E. × 500.

cases with sulphamezathine but soon became suspicious that the sulpha drugs enhanced the chances of nervous symptoms. Lately he had used penicillin in its place.

A MEMBER: He had made it a practice for 18 months to supplement all patients on heavy sulphamezathine with the whole of the B. complex and the clinical impression was that he did not get nearly so many nervous complications.

Mr. BATEMAN asked if anyone had seen hard pad disease in a dog that had recovered from distemper or in a dog after reacting to administration of vaccine-virus. The temperature reaction occurred after four to six days of virus and was such a dog susceptible to hard pad disease in practice?

Mr. HODGMAN: He once had an eleven-year-old dog with hard pad disease. This dog was reported to have had distemper—it certainly had puled teeth—so that if one could accept this latter fact as being indicative of the animal having had distemper, then his answer to that question was "Yes."

Mr. BATEMAN: He found it hard to believe that hard pad was a specific disease apart from distemper. He believed it was intimately connected with distemper. It could be part of the whole picture and he was very much afraid that the people who produced the virus had some way of separating what might have been a composite virus into more than one entity.

Dr. J. T. EDWARDS: That view corresponded well with the opinions of a young Egyptian (Dr. Wasif Mansey) at the Southport Congress [(1948) *Vet. Rec.* p. 462]. The distemper virus used for vaccination against distemper, according to that view, was taken from the spleens of ferrets and in the course of passage in these animals had become a strain of virus with predominantly enterotropic characteristics. When they got a mild degree of immunisation set up as Mr. Bateman suggested, against actual field distemper, which at the time might have pantropic characteristics, the immunity, though powerful enough to suppress most gastro-enteric and even broncho-pneumonic symptoms, might not be strong enough to ward off later sequels of encephalitis, or, maybe, epidermal lesions, that is, infection of the embryonic ectoderm (comprising as was known both the cerebro-spinal and epidermal tissues). In Egypt, Mansey claimed to have succeeded in fixing the distemper virus on the brains of mice and the symptoms and the lesions produced at first with the Egyptian strains were paraplegic, but after a few further passages there was a change and the symptoms first observed were fits; whereas with the ferret-adapted spleen virus used in Britain fits were produced at the outset. This was a curious phenomenon which led us right beyond the early studies of Laidlaw and Dunkin. He (the speaker) said he wished to stress that Mansey's views certainly needed corroboration and confirmation by other workers before they could be accepted but, all the same, we now better appreciated that with many of the viruses extraordinary changes could take place in their constitution. Not only could one get distinct immunological types of a virus as was manifested strongly in the case of foot-and-mouth disease, or complicated changes in immunological types as seemed to occur in the case of the influenza viruses, but a given virus might come to exhibit marked changes both in host affinity and in tissue-tropisms. Change in host affinity was well illustrated in the process of goat-adaptation of the cattle plague (rinderpest) virus and, indeed, in the much earlier Pasteurian rabbit adaptation of the dog "street" rabies virus, which had a still much earlier forerunner again in the Jennerian cowpox relation to human small pox. Though marked change in host affinity had recently been claimed by Green to take place in the dog distemper virus in the course of ferret passage, it had not been strongly suspected (at any rate until Mansey's work) that considerable modification could also take place in it as the result of change in tissue tropisms. It was, of course, something which ought to have been suspected for a long time in the light of the extremely varied picture shown by clinical distemper, but one had been prone to attribute such variations largely to the secondary bacterial complications. Changes in tissue tropism came into prominence several years ago as the result of Max Theiler's work in producing neurotropic strains in mice of the pantropic human yellow fever virus; and, again, later, in South Africa this finding was put to good use by Alexander and his col'eagues in the production of mouse neurotropic strains of the several immunological types of the horse-sickness virus. Further research work on distemper in this country was now clearly demanded, because from the consequences of reports forthcoming from field workers it would seem that the prevailing field strains of the distemper virus were changing likewise in their characteristics. Possibly such changes might be taking place through widespread immunisation of the dog population with ferret adapted strains which possessed predominantly anti-enterotropic characteristics, but were not sufficiently immunogenic to protect against all the other pantropic (including neurotropic and dermotropic) components or moieties.

Mr. BATEMAN said some of the dogs recovered from what had been diagnosed as hard pad disease did not take distemper later as they were immune. The whole picture of a dog suffering from distemper was really one of epidemiological changes all the way; and he felt that if vaccination had been satisfactory to all they would have heard little of hard pad disease. There were batches of vaccinated dogs that were distemper-immune and were immune to hard pad disease and there were bigger batches that were not distemper-immune and not immune to hard pad disease. Dogs with suppressed symptoms and high temperatures were nothing new but the recording of hardening of the pad was something new.

Dr. EDWARDS: If the work he had already mentioned was confirmed, then the distemper virus might be found on occasion to lodge selectively either in the central nervous system or in the epidermis, or particular areas of the epidermis (as in foot-and-mouth disease). He believed the profession took too much for granted in Laidlaw and Dunkin's work. Excellent though that work was, it by no means marked finality. There was yet a lot to learn, particularly from the experiences of field practice. There had been a tendency for that excellent work to put off other workers from further pursuit of necessary knowledge before they gained the requisite field experience. The distemper virus, or, possibly, viruses were doubtless like some other viruses. They might be undergoing changes in composition so as to be overcoming the present vaccination. Virus workers had now come to realise such possibilities, especially from studies such as those undertaken by the influenza workers, and were exercising themselves to devise means of meeting these possibilities in their methods of immunisation. Laidlaw and Dunkin had confirmed, in work published in 1926, the original finding of the French worker Carré, published in 1905, that distemper was caused by a virus—a finding that had been obscured for several years by the belief of many workers that the secondary invader, *Brucella bronchiseptica*, was essentially the primary cause of the disease. Though they amplified Carré's work in many respects and extended the findings of the Italian worker, Puntoni, in the matter of immunisation, accepting the virus as the aetiological agent against which protection must needs be devised, they did not in reality propound a system of vaccination fully workable in the field. In that respect, the profession could never sufficiently express its indebtedness to Professor Dalling, who had to bear the burden subsequently of devising a really workable system.

Mr. BATEMAN: Laidlaw and Dunkin had to produce something for those in the field to get a vaccine and they did it, but it was left to Dalling to show that virus and saline were not suitable. There was just a danger that those working on distemper and hard pad disease might be inclined to work on without knowing the actual facts. They still saw the original type of distemper; the virus was still there but if people working in the laboratory did get changes they should come out in the field and get experience in the field.

Dr. EDWARDS: As he understood Mr. Bateman, the vaccine they were using might be a good immunogenic against an acute enterotropic form of distemper but it might not always confer complete protection against the neurotropic or dermotropic components of a highly virulent pantropic epizootic.

Mr. BATEMAN: That was not strictly true. He did not think many of the dogs were immune against anything at all. What had they, in the field, got by vaccine? They had done nothing except inject.

Dr. EDWARDS: Did Mr. Bateman imply that often after injection of the distemper vaccine as now issued to the field, he had failed to observe a temperature reaction in his inoculated dogs?

Mr. BATEMAN: In the absence of reaction he had no evidence that his dogs were immunised against anything at all.

Dr. EDWARDS: It was possible that many were really not vaccinated at all. He realised that in the preparation and issue of a fragile virus like the distemper virus it was fatally easy for the vaccine to be completely inert at the moment of inoculation. Then most certainly the dogs would not be immunised, but with a mild reaction arising with a distinct rise in temperature, it was still possible that a partially protected animal might succumb to an encephalomeningitis or a localised epidermal inflammation, of which hard pad was a manifestation. That view, of course, must needs be confirmed by direct experiment.

Mr. BATEMAN: That statement was akin to many beliefs that if the people who produced the virus were too long and did not come out in the field they would always have trouble.

Dr. EDWARDS: If they changed the characteristics of the virus from its original then they might not immunise an animal satisfactorily.

Professor MCCUNN: Although they had realised that virus was a living thing they had not taken into consideration that it reacted to its environment. The viruses with which Laidlaw and Dunkin had worked represented the common form of distemper which was enterotropic and pneumotropic and only occasionally neurotropic. If research workers looked upon viruses as only working in one direction then that was where they went wrong. A living thing could change its method of resistance. He believed that when they

revived their virus from fresh natural sources it reverted to a pantropic form which could resist all forms of attack. If they kept to one virus it became too specific. This same condition applied in smallpox. At first they got uniformly good results with immunisation. The virus then reacted or attacked in another way and so defeated the immunisation.

Dr. Edwards: All that had been said simply showed how necessary it was for those who worked in the laboratory to keep always in the closest possible touch with all developments in the field and treat with the greatest respect the observations of experienced practitioners. Professor Dalling, in extremely rare degree, in his own experience of laboratory workers, was gifted with the necessary insight into such co-operation, without which it was rare that anything that looked promising in the laboratory could be successfully launched in practice. In his (the speaker's) own vivid recollection, when the indications arising from the *Field* distemper research controlled by a competent committee (with Sir Charles Martin as its chairman) under which Laidlaw and Dunkin were employed were passed on for economic exploitation to the commercial organisation under which Dalling was at the time engaged, the first issue to practitioners consisted of an inactivated vaccine, namely formalised infected dogs' liver, to be administered prophylactically in a single dose. When this failed, a double dose of the same inactivated vaccine injected at an interval of a few days, was recommended, and this again failed. Then came the double inoculation of, first, the inactivated vaccine, to augment temporarily the basal immunity, prior to inoculation of the live virus itself, the method of issue of that live virus at the time, as Mr. Bateman had already said, being merely the crude one of suspending infected ferret spleen in a saline solution, which was doomed to bring about a rapid inactivation of the virus. Improvement then followed with the issue of a freeze-dried virus, the methods of freeze-drying at the time being again very imperfectly understood. He (the speaker) remembered warning Professor Dalling at the time, at an excellent review of progress the latter gave at a central meeting, about 1930, soon after his own return from India after a large experience in cattle plague immunisation, to suspend judgment on the comparative efficacy of the vaccine-virus and serum-simultaneous or serum-virus method (which was introduced also about that time) until he had obtained at least a couple of years of field experience, and Professor Dalling's own admission afterwards to him that he (the speaker) had never uttered a truer warning, for both methods, in his parallel experience, contained inherent defects, the desideratum in each case that the virus should establish itself firmly in the animal organism without causing dangerous symptoms being most difficult to achieve even within the well-controlled conditions of laboratory research. That, after all, a workable method was obtained with all its many imperfections, was attributable to Dalling's patience and sympathy with practitioners. At the present moment, the prospects seemed to be opening out for a radical change in methods, what with growing knowledge generally of the viruses and with the collation of evidence forthcoming from field users upon the efficacy or shortcomings of the methods of immunisation against distemper hitherto employed. It was not improbable that a single inoculation would become available, somewhat on the lines of Green's ferret-adapted virus or Wasif Mansey's mouse-adapted neurotropic strain, and if virus variants were arising care would have to be taken to incorporate the corresponding immunogenic attenuated variant viruses in the vaccines issued, as had been already done in horse-sickness immunisation. A discovery of great practical significance was that of Green that the interference phenomenon operated markedly in attenuated live-virus distemper immunisation, which, as was known, was quickly appreciated by field workers in India to be a supreme merit of goat-adapted virus cattle plague immunisation, long before the exact significance of the phenomenon was appreciated (by Pfaff) in the laboratory.

Mr. Bell: He was of the opinion that the canine distemper virus issued in this country was a "street" virus. The virus was taken from dogs repeatedly and at short intervals, therefore, attenuation of the virus or interference could play little or no part in the immunisation process.

Mr. Bateman: It came from the ferret.

Mr. Bell: As far as he was aware, it was got from dogs and no attempt made to produce a ferret-adapted virus.

Dr. Edwards: In reference to Mr. Bell's contention that what was issued was not a ferret-adapted strain, it had been his own experience as far back as 1927 that caprinisation of the cattle virus took place just as rapidly whether the bovine virus was passaged direct through goats or alternately through goats and cattle. Hence, if at the laboratory the distemper virus was passaged through ferrets and occasionally passed back again through dogs that did not prevent its becoming eventually a ferret-adapted strain. Such a possibility would always arise unless the virus was obtained direct from dogs in the field or maintained in dogs, and not ferrets, in the laboratory. He would like again to stress at that meeting his conviction that if it had not been for Dalling this immunisation would have gone to pieces long ago, for it was he alone who bore the burden of ensuring patiently that something was devised that was workable in practice.

Professor McCunn: No doubt tremendous steps were taken to refine this material. Previously it was cruder. They wanted one active to all three types—enterotropic, neurotropic and pneumotropic.

Mr. Bateman: Up to 1939 he had immunised 400 puppies and had 98 per cent. success.

Mr. Ramsay Millar: There was a lapse during the war of the production of commercial inoculum.

Mr. Bell: Dr. Edwards' point about super-attenuated virus would indicate that a trial of Green's ferret-adapted virus might be made in this country, since this vaccine appeared to conform to recent advances made in the study of virus antigens.

Dr. Edwards: They had tapped, at that extempore discussion, a fertile field for more prolonged discussion and for the coming session, of profound interest to both the practitioner and the research worker. The lessons of the past were that neither could afford to disregard the experience of the other, but must cultivate a mutual profound respect. There were certainly at the moment phenomena arising in the field in connection with distemper immunisation which indicated that the beliefs of a few years ago that the methods of distemper immunisation had become standardised and definitive no longer held good. So often, men working in laboratories formed compacts of their own, in which the currency was the published paper written necessarily in a jargon intelligible to themselves, which often mystified the practitioner, who, on the other hand, had necessarily to attune his own language so as to be intelligible to the general public in interpreting the many and complex problems he was called upon to treat; yet his (the practitioner's) experience was a rich one. It was, therefore, of fine augury that, at last, after a doleful interregnum, conversant with neither language, since Stockman's death in 1926, a man was entrusted to the headship of official affairs in the person of Professor Dalling, who was essentially a hard working veterinarian, and who had exercised himself to understand the jargon of laboratories without ever losing intimate touch with the colloquial language of the practitioner, which was a prerequisite, in reality, for getting at the heart of any veterinary problem. Like Stockman, therefore, he was not likely to become submissive to mere political or bureaucratic casuistry. He (the speaker) said he had been unexpectedly drawn into this discussion in attempting to dissipate the perplexities exposed to him by his practitioner friends there, and his responses must be taken as uttered extempore. Of course, if the virus, whether attenuated or not, was not fully viable at the very moment of inoculation, it would stand very little chance of establishing itself in the tissues of an animal passively strongly protected, according to the system now in common use, with anti-serum.

Mr. Roe: They had succeeded in introducing into Cyprus a distemper which they found was not the distemper they knew before. Dogs in quarantine developed a high centre of condition at the back of the neck and when attended they did not have fits but they gradually became worse; they lost the power of the hind legs and eventually died. They had ten cases during 1947 in four months and they all occurred in the summer months but they had had none since. They had none during the winter and spring. The affected dogs had been immunised and some had been inoculated with vaccine; he was not aware of any temperature reaction after the administration of the virus but they were certainly inoculated with the virus serum method. Others were inoculated overseas and had not contacted dogs in any way. They were in complete ignorance of the cause of the condition.

Replying to Mr. Millar, Mr. Roe said in two cases the dogs came from India and two from England. They were not in quarantine from England but the other dogs had been in the country for some time.

Mr. Clarke asked if the dogs had been in contact with dogs bred in the Island, and Mr. Roe said some of the dogs imported had been released from the quarantine period and afterwards came in contact with dogs on the Island.

Dr. Edwards: In other countries it was not always easy to determine to what extent distemper preponderated in the local complex of dog diseases. In India, for example, he had never been able to establish clearly whether distemper existed there or not, though the complex was, on the whole, more devastating than in this country, and included such formidable diseases as tick fever (piroplasmosis), surra (trypanosomiasis), hookworm disease, and Stuttgart. In Egypt, distemper certainly occurred, but in a proportion within the local complex somewhat intermediate between that of India and that of England, so that about 50 per cent. became infected overtly or occultly, during adolescence, but a large number escaped infection, to become clinically infected later, often at an advanced age; so that, in Egypt, distemper was not necessarily as the French called it in France a *maladie de jeune âge*.

Mr. Bateman said that distemper was spread by discharge but in

hot sun there was little chance of it being infective.

Mr. Millar asked whether it was equally infective when dry, but Mr. Bateman said it was not in hot sun.

Mr. Bell: In East Africa during the war the jackals got dog distemper and died in their thousands.

Mr. Fulton asked what they would advise if a dog died in a house from distemper and the owner wanted to buy another after three weeks. Mr. Bateman: There was a chance of the dog picking it up in the house but he would inoculate before bringing it in, with 10 c.c. serum.

Mr. Fulton: Would an increased dose increase its usefulness?

Miss Uvarov: She used 10 c.c. for dogs entering infected premises.

Mr. Bateman: He regarded it as vital to let the virus have 48 hours without putting in antibody to control it. He thought reaction should occur in the presence of antibody.

Mr. Bell asked Dr. Edwards whether, in his experience, it was possible to block out the antigenicity of any virus by giving an excessive dose of anti-serum.

Dr. Edwards: That was possible, in certain circumstances, with both the viruses with which he had had most experience, namely, those of cattle plague and foot-and-mouth disease. In the case of cattle plague, for example, when cattle were inoculated, as in his experience in India, with a highly bovinised viable strain of virus it was possible to administer simultaneously such a large dose of anti-serum that all apparent reaction, including temperature reaction, was blocked out, and find them afterwards solidly immune against inoculation with virulent cattle plague. When, however, an attenuated strain in the shape of a highly caprinised strain, was inoculated into cattle it was readily possible to block out reaction so that the virus failed to establish itself at all in the tissues and the cattle were found afterwards to be fully susceptible. This had been forced upon his notice, not only in the course of laboratory experiments (at Pirbright) but also during the progress of his recent cattle plague eradication campaign in Egypt. There, at Assiut, in Upper Egypt, in the case of Jersey cattle belonging to an American Mission, those at administrative veterinary headquarters, without his knowledge, had counselled inoculation of 50 c.c. of anti-serum simultaneously with a very highly caprinised (Nigeria) strain of goat virus and all trace of reaction virulence was blocked out, whereas in a neighbouring village (Beni Morrah) among a large number of indigenous cattle of different ages inoculated at the same time (August, 1946) with the goat virus alone, all grades of reaction were observed by him, ranging from almost afebrile and symptomless reactions in the older, more emaciated, ones, to acute febrile clinically disturbing ones in well-conditioned younger cattle, from the tissues of which the same goat virus was recovered on his return to laboratory headquarters.

Mr. Bell said that blocked out reactions was his experience with goat-adapted cattle plague virus and cattle plague anti-serum and that it was preferable to administer nominal doses of serum and produce immunity rather than large doses of serum which would prevent a reaction and at the same time prevent the development of immunity.

Mr. Bateman: With regard to a virus antibody, if the dog tended to go down some gave 20 c.c. as the minimum amount but his experience showed 10 c.c. was generally enough.

BRITISH TUBERCULOSIS ASSOCIATION'S ANNUAL CONFERENCE

The annual conference of the British Tuberculosis Association will be held at Trinity College, Cambridge, from Wednesday, April 6th to Saturday, April 9th, when British authorities on the subject will be joined by others from America and Canada, and the Continent of Europe, for its discussion. On Thursday afternoon, Dr. J. A. Young, of Cambridge, will speak on "Studies in the Vaccination of Cattle with the Vole Bacillus," and on the following afternoon Mr. John Francis, B.Sc., M.R.C.V.S., will address the conference on "Infection with the Bovine Tubercle Bacillus, including its Control and a Comparison of Tuberculosis in Man and Cattle." The demonstrations will include electron microscopy studies of tubercle bacilli.

The annual general meeting of the Association takes place on Wednesday evening, and the reception and annual dinner on that of Friday, April 8th.

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TEAM RIDE FROM LAND'S END TO JOHN O' GROAT'S

Eight men and women, all hunting people, are to ride as a team from Land's End to John O' Groat's as a demonstration to popularise the horse. The party plan to set off from Land's End on March 31st and hope to reach Edinburgh by April 19th. They will carry a message to the Lord Provost from the Mayor of Penzance.

CLINICAL COMMUNICATION

Successful Treatment of Nymphomania by Ovariotomy

DAVID BURGESS, M.R.C.V.S.

Salisbury, S. Rhodesia

Case I

Subject.—Friesian cow, about seven years of age, non-pedigree.

History.—The cow had her third and last calf a year and a half before treatment commenced. Since then her service dates were irregular and just prior to treatment she was continually on heat.

Examination.—Examination revealed left ovary inactive, right ovary cystic—as large as an orange—and a muco-purulent metritis.

Treatment.—An attempt was made to express the cyst per rectum with no results. 1,500 i.u. of luteinising hormone (Burroughs Wellcome) was given intravenously. This caused a temporary abatement of the nymphomania.

A few days later, an epidural was given and the cyst was punctured *per vaginam* using a trocar and cannula. Examination a fortnight later proved that the cyst had refilled.

It was decided, with the owner's consent, to carry out ovariotomy on the affected side. This was performed, under an epidural and suitable restraint, in the standing position. The ovary was removed *per vaginam*, using the site above the *os uteri*, with the long ecraseur.

The cow immediately settled down to a normal oestrus cycle. The vaginal wound healed without complications. There has not as yet been time to see if a pregnancy results.

I should point out that the vagina was irrigated with normal saline prior to the operation. No complication set in despite the muco-purulent metritis and the latter cleared up spontaneously after the operation.

Case II

Subject.—Collie bitch, 18 months old, virgin.

History.—Nymphomania. The bitch had come into season normally six months before. Now she had come into season and would not go off.

Diagnosis.—Supposed cystic ovaries.

Treatment.—200 i.u. of luteinising hormone (Burroughs Wellcome) was given subcutaneously. The symptoms of heat abated for seven days and then returned. I suggested to the owner that an exploratory laparotomy be carried out.

The bitch was given nembutal intravenously until deep anaesthesia was obtained. Laparotomy was performed in the left flank. The left ovary was perfectly normal; the right ovary could not be examined through the same wound, because of the short ovarian ligaments.

Laparotomy was carried out through the right flank and the right ovary upon examination proved to consist of a cyst about the size of a small marble. The ovary was removed, after a ligature had been applied and the peritoneal and skin wound closed. The bitch recovered uneventfully and heat symptoms immediately disappeared. She was operated on about four months ago and has just come into season normally and has been mated. The cyst was very thick walled.

Comment.—My experience in this country has shown a general infertility in all domestic animals. Apart from infectious disease, ovarian troubles cause a big proportion even within infected herds, in the case of cattle and horses.

Whether the condition (ovarian) is due to a mineral deficiency or too much strong sunlight is left to research to discern.

Weekly Wisdom

". . . Thinking is an occupational disease of writers; and the more you think, the less you are in love with the future—unless you fancy that everything can be put right to-morrow by liquidating everyone who disagrees with you, placing all publishing and editing into the hands of Civil Servants, and writing nothing but propaganda about the glorious liberty you enjoy. This, however, seems a delusion that attacks chiefly scientists and deans: our men of letters, at any rate, are mercifully immune. . . ."

Raymond Mortimer in *The Sunday Times*, January 9th, 1949.

ABSTRACTS

[Torsio Abomasi in Cattle, with Special Reference to its Diagnosis and Treatment. LOJE, K. (1948.) *Medlemsbl. danske Dyrlaegeforen.* Special Number, August, 1948.]

The author describes in some detail the symptoms and treatment of this condition which he has encountered chiefly in milch cows in Denmark. He gives a number of case histories.

The abomasum deviates to right or left, more frequently the latter. The condition is not associated with diarrhoea but in those cases which last for 36 hours or longer there is melaena. In some instances the abomasum can be palpated on rectal examination. Paracentesis abdominis is recommended for diagnostic purposes. The trocar and cannula are inserted through the abdominal floor; the trocar may or may not enter the abomasum. If the case is one of torsio abomasi a haemorrhagic fluid is withdrawn when the abdominal wall is punctured, a reddish-brown muddy fluid when the abomasum is entered.

The condition, unless treated, is always fatal. Treatment consists of surgical interference to correct the torsion.

The author and four other clinicians between them have operated on 22 cases, 16 of which have recovered.

Although the reader gathers the impression that *post-mortem* examinations of fatal cases have been made, there is no description of the findings. This unfortunate omission seriously detracts from the value of the report.

S. L. H.

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[Equine Sarcoid, a Cutaneous Neoplasm. OLSON, C. (1948.) *Amer. J. vet. Res.* **9.** 333.]

The clinical and pathological observations in two cases of equine sarcoid together with an account of a successful autotransplantation constitute the basis of this article.

Equine sarcoid is a cutaneous tumour, usually multiple, which tends to recur following removal. The common sites are the lower portions of the legs, eyelids, lips, other parts of the skin of the head, sheath of the penis and inner aspects of the thigh.

In Case 1 the main tumour mass was situated in the subcutis of the mandibular region. Two smaller tumours were present in the skin of the right breast. There was a history of previous tumours, in the right cheek and abdomen; these had been removed. The horse was always in fairly good condition.

On *post-mortem* examination, cross section of the tumour revealed a mass of fibrous tissue in which there were numerous abscess cavities and areas of gelatinous tissue. No metastases were found. Fibroblasts were the main cell type.

Case 2 was a mule. Tumours on the neck, ear and two on the left thorax recurred readily after removal. The *post-mortem* findings and histopathology were as in Case I.

In the first transmission experiment 16 sites on both sides of the neck of the mule were inoculated subcutaneously, intradermally, by scarification and on intact skin with fresh and boiled material from one of the tumours, in 0·05 c.c. amounts. The sites were 2 in. apart and duplicates were set up. Various preparations of the same tumour mass were inoculated in the same way in a condemned 14-year-old mare.

After six months two small nodules appeared at the sites of inoculation with fresh material on scarified skin in the case of the mule; no tumour formation occurred in the mare.

Experiment 2 was on the same lines, but inoculations (0·2 c.c.) were only made intradermally and on scarified skin. The inoculum was rubbed into the latter sites. No tumours developed.

The pathogenesis of the tumour formation is discussed.

The author states that equine sarcoid can be regarded neither as a benign fibroma nor as a malignant fibrosarcoma. Some term to indicate it as an entity is required.

S. J.

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[Penicillin Therapy in Chronic Bovine Mastitis. III.—Treatment of Mastitis. PACKER, R. A. (1948.) *Amer. J. vet. Res.* **9.** 259.]

This article follows work previously reported by the author on the *in vitro* sensitivity of mastitis organisms to penicillin. The results appear to be well established by previous workers. In the series of cows reported, 83 per cent. of streptococcal infections were bacteriologically cured; with staphylococcal infections 48 per cent. of cows were cured. The author repeats previous workers' statements that the frequency of infusion is more important than the number of units of penicillin administered at each infusion.

D. L. H.

REPORT

[Report of the Veterinary Director General, Department of Agriculture, Canada, for the year ended March 31st, 1948.]

The report states that with the exception of a few outbreaks of mange, and the appearance of Newcastle disease on six premises, the livestock population of Canada was kept free of the more serious animal plagues. All provinces of Canada remained free of rabies, swine fever, foot-and-mouth disease, glanders, anthrax, dourine, sheep scab, and scrapie. Two thousand seven hundred and ninety herds were under the Department's supervision for the control of brucellosis, and 1,754 of these herds were listed as free from the disease. The control of tuberculosis under the accredited, restricted area and supervised herd plans was hindered by a shortage of veterinary staff. Under the first-named scheme 297,648 cattle were tested, the percentage of reactors being 0·16; under area testing arrangements 1·44 per cent. of reactors were found out of a total of 904,414 animals; while under the supervised herd plan out of 38,596 animals tested 0·74 per cent. reacted. Altogether 12,413 animals were slaughtered on account of tuberculosis during the fiscal year, and compensation paid to the amount of 463,295 Canadian dollars; 6,825 chicks and fowls, and 19,240 hatching eggs were destroyed in order to implement the slaughter policy adopted with regard to Newcastle disease.

The number of full-time employees of the meat and canned foods section (of the Health of Animals Division) was 431, and 114 establishments were under inspection. The "total inspected livestock slaughter, including poultry" was 9,236,029. There was a marked decrease in sheep slaughtered, but a corresponding increase in the number of pigs slaughtered. Substantially more horses were slaughtered, but 10 per cent. less cattle and calves. Out of 1,352,793 cattle slaughtered, 13,427 (0·99 per cent.) carcases were totally condemned; 2·08 per cent. of calf carcases were condemned (141,212), 0·51 per cent. of sheep carcases and 0·32 per cent. of pig carcases. Of the carcases condemned tuberculosis was the reason in the case of 31·12 per cent. (cattle) and 15·73 per cent. (pigs).

G. P. W.

REVIEW

[Manual of Veterinary Bacteriology. By RAYMOND A. KELSER, D.V.M., A.M., PH.D., and HARRY W. SHOENING, V.M.D. Fifth Edition: pp. xi+767, with 11 tables and 101 figures. Price 36s. net. London: Baillière, Tindall & Cox.]

This work was prepared primarily for the use of those concerned with veterinary bacteriology; hence no consideration has been given to organisms not of interest to veterinary medicine. Sections have been included on protozoa and haematology as a working knowledge of these two subjects is necessary for a bacteriologist investigating disease and disease processes. Although this argument is put forward by the senior author in his preface to the first edition a similar plea could be made for the inclusion of the principal features of morbid anatomy and the methods employed for the diagnosis of disease. It is not contended, however, that a section on morbid anatomy should be included but greater emphasis on the actual disease processes in infection would be valuable for students of veterinary medicine and would mean that more attention would be paid to the methods employed in diagnosing the individual conditions. Unfortunately this aspect is somewhat overshadowed by the descriptions of the bacteria and their reactions in the laboratory. That previous editions have satisfied a want is shown by the presentation of a fifth, but even this is not well balanced. The value of colostrum in white scours is apparently of no moment yet there is an adequate description of *Bacterium coli;* the reticulo-endothelial system, an important aspect of disease resistance, is not described as such and its essence receives much less attention than Ehlich's side chain theory.

Throughout the book one is also struck with the small amount of information given on the antigenic structure of bacteria—and this is so necessary in modern bacteriology. This is partly covered by the chapter on bacterial variation; the chapters on viruses and virus diseases are well written and a further estimable feature of the book is the list of references which accompany the text.

There are a number of errors and omissions which should be rectified. Florey's name is consistently misspelt, N/60 should be N/20 on page 54, *C. tuberculosis* and *C. smegma* should surely read as *M. tuberculosis* and *M. smegma* respectively (page 106). No mention is made of the work of Robinow on bacterial nuclei and the old error of Bergey giving *Corynebacterium pseudotuber-*

culosis rodentium as a synonym for *Pasteurella pseudotuberculosis* is perpetuated. It is unfortunate that the account of the types of *Clostridium welchii* is meagre and this is rendered confusing by their supposed relationships. For example, it is not correct to state that type B toxin is neutralised by types A, B, C and D antitoxins, whereas if the statements were reversed and this portion made to read that type B antitoxin neutralises toxins A, B, C and D, then this would be a substantially correct statement. No mention is made of the formation of a toxin by *C. pyogenes* and it is not exactly true to say that *C. equi* is similar to other species of the genus regarding susceptibility to antiseptics; oxalic acid is used in the isolation of this organism from a mixed flora.

In spite of errors this book is of considerable value especially because of its descriptions of various techniques, and this alone makes it a useful reference book and an aid to work at the bench.

Re New Cars for Veterinary Surgeons

In our issue of February 26th, pp. 105 and 106, we printed correspondence between the N.V.M.A. and the Ministry of Supply on this subject. This correspondence referred to new arrangements which had been made on the instructions of the Ministry for giving increased assistance to doctors and midwives in urgent need of new cars and indicated that the Association was endeavouring to obtain a further meeting with the Ministry in an effort to secure the extension of these new arrangements to cover orders placed by veterinary surgeons.

The Ministry's reply is as follows:—

Dear Sir,—I am sorry that as a result of sickness in this Section of the Department, your letter of February 21st on the subject of the preferential delivery of new motor cars to veterinary surgeons has not been previously acknowledged.

At the time of your meeting with Mr. Bennett on October 6th, 1947, there was an arrangement by which the distributive side of the motor industry had been asked to show special preference to any requirements of doctors, and midwives, and this request has been extended to include veterinary surgeons.

Because this agreed preferential treatment was not giving the desired effect, however, in some urgent cases, the question was reviewed between the motor industry and this Department. As a result it was agreed between the two parties that, in cases where the lack of a reliable car might result in the loss of human lives, the manufacturers—as distinct from the distributive trade—would take special steps to see that a new car was promptly delivered. This arrangement was additional to the general preferential delivery arrangement for doctors, midwives and veterinary surgeons (which still stands) and was entered into in spite of the Government's general policy not to reintroduce a priority system for the delivery of motor vehicles because of the life-and-death aspect. You will appreciate that it was not practicable to include veterinary surgeons in this category.

Since your last letter the Society of Motor Manufacturers and Traders, Ltd., has again brought the matter to the attention of the motor industry, having mentioned categorically in a letter to them that next to the urgent demands of doctors and midwives, those of veterinary surgeons are of exceptional importance.

Yours faithfully,
(signed) M. Everard Taylor.

Ref.Es(d) 10/Policy/197.
Ministry of Supply,
Engineering Industries Division,
Shell Mex House,
Strand, London, W.C.2.

Although the Ministry of Supply apparently do not think the proposed meeting would serve any useful purpose, it is felt that the further action taken by the Society of Motor Manufacturers and Traders referred to in the above letter and a further discussion which representatives of the Association have had with that Society, should lead to orders for new cars placed by veterinary surgeons receiving the preferential treatment recommended by the Society to a more liberal degree in the future.

The council of the Shetland Pony Stud Book Society and the Department of Agriculture for Scotland have decided to send more pedigree Shetland pony stallions to the islands to improve the breed and meet the increasing demand for good ponies from abroad.

* * * * *

East Africa Research Station.—The East African High Commission has given orders for work to start immediately on an experimental station for the East African agriculture forestry and veterinary research organisations.—*Daily Telegraph.*

NOTES AND NEWS

Diary of Events

Apr. 5th, 6th and 7th.—Quarterly Meetings of Council, R.C.V.S.

Apr. 6th.—Meeting of the Editorial Executive Sub-committee, N.V.M.A., 36, Gordon Square, W.C.1, at 2.30 p.m. (*Brought forward to first Wednesday in the month*).

Apr. 6th.—Meeting of the Lancashire Division, N.V.M.A., at Manchester (Grand Hotel), 2.30 p.m.

Apr. 6th to 9th.—Annual Conference of the British Tuberculosis Association at Trinity College, Cambridge. (*See Note.*)

Apr. 7th.—Meeting of the Central Veterinary Society at the Royal Veterinary College, Camden Town, 6 p.m.

Apr. 8th.—Meeting of the Sussex Division, N.V.M.A., at Arundel (visit to Lavington Stud), 2.30 p.m.

Apr. 12th.—Central Veterinary Society: One-day Poultry Course at the Royal Veterinary College, commencing at 10.30 a.m.

Apr. 13th.—Meeting of the Comparative Section of the Royal Society of Medicine, at 1, Wimpole St., W.1, 5 p.m.

Apr. 20th.—Special Meeting of the Society of Women Veterinary Surgeons Division, N.V.M.A., at the Royal Veterinary College, London, N.W.1., 7.30 p.m.

Apr. 20th, 21st and 22nd.—Quarterly Meetings of Committees and Council, N.V.M.A., in London (Meeting of Council, April 22nd).

Apr. 21st.—Extraordinary General Meeting of the Royal Counties Division, N.V.M.A., at the Geology Lecture Theatre, The University, Reading, 7 p.m.

Apr. 21st.—Annual Race for the R.A.V.C. Point-to-Point Challenge Cup, at Melton Mowbray (Quorn Hunt Meeting).

Apr. 21st.—Meeting of the Association of Veterinary Teachers and Research Workers, at the Royal Veterinary College, London, N.W.1, 11 a.m.

Apr. 23rd.—Association of State Veterinary Officers: Annual Meeting at the Royal Veterinary College, Camden Town, 2 p.m.; Annual Dinner at the Criterion Restaurant, Piccadilly, 6.30 p.m.

Apr. 27th.—Meeting of the East Midlands Division, N.V.M.A., at Sutton Bonnington, 2.15 p.m.

Apr. 27th.—Meeting of the Southern Counties Division, N.V.M.A., at Southampton (Polygon Hotel), 6 p.m.

Apr. 28th.—Special Meeting of the Central Veterinary Society at the Royal Veterinary College, Camden Town, 2 p.m.

Apr. 28th.—Meeting of the South-Eastern Division, N.V.M.A., at Tunbridge Wells (Mount Ephraim Hotel), 2.30 p.m.

May 3rd.—R.C.V.S. Animal Management Examination tour, commencing with London.

May 16th.—R.C.V.S. Pharmacology, etc., Examination (Revised Syllabus). Written, 10 to 12 noon, at appropriate Colleges.

May 16th.—Annual Meeting of the R.A.V.C. Golfing Society, at North Hants Golf Club, Fleet, 10 a.m.

June 1st (Wednesday).—Annual General Meeting of the Royal College of Veterinary Surgeons.

June 1st, 2nd and 3rd.—Quarterly Meetings of Council, R.C.V.S.

June 7th and 8th.—D.V.S.M. Written Examination, Royal (Dick) Veterinary College, Edinburgh.

June 23rd and 24th.—R.C.V.S. Membership Written Examination.

Aug. 8th to 13th.—Fourteenth International Veterinary Congress, Central Hall, Westminster, and Church House, Westminster, London, S.W.1.

Aug. 12th to 15th.—Sixty-seventh Annual General Meeting and Congress, N.V.M.A., in London.

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PERSONAL

Appointment.—Mr. Peter S. Bridge, B.SC., M.R.C.V.S., has been appointed herds manager and veterinary surgeon for the farms of the London Co-operative Society. The Society has five main farms and a few smaller ones, situated mainly in Essex and Suffolk, comprising at the moment 576 milking cows, and followers. In a recent typical week 11,358½ gallons of T.T. (certified) milk was produced. The cattle are mostly pedigree attested dehorned Ayrshires, but there is one herd of Jerseys and some Cross-Breds. The farms also carry pigs and poultry, and sheep farming is contemplated.

Mr. Bridge, who has been assistant veterinary inspector with the City of Edinburgh for the past three-and-a-half years, is a Cheshire man. From Queen Elizabeth's Grammar School, Ashbourne, he entered the Royal Veterinary College, Edinburgh, and Edinburgh University. He graduated B.Sc. and M.R.C.V.S. in July, 1945, and obtained honours in several subjects at professional examinations.

Last year he took a post-graduate course and gained the Diploma in Veterinary State Medicine. He has already had a wide experience in veterinary work, particularly in connection with dairying, and has acted as local inspector for the Ministry of Agriculture.

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Birth.—Wilson.—On March 12th, 1949, at 182, High Road, Wembley, to Myrtle, wife of Frank A. Wilson, M.R.C.V.S.—a daughter, Christine.

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R.C.V.S. OBITUARY

Darwell, Arthur Ernest, Highfield, Gregory Avenue, Colwyn Bay. Graduated N. Edinburgh, April 29th, 1884. Died February 20th, 1949; aged 87 years.

Ward, Joseph, 3, Hough Hall Road, Moston, Manchester. Graduated Glasgow, April 27th, 1885. Died March 15th, 1949; aged 83 years.

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FRENCH MEAT: PRECAUTIONS AGAINST FOOT-AND-MOUTH DISEASE

Under the terms of a new agreement a limited quantity of meat, mostly pigmeat, will be imported from France. It is not likely that the quantity of pigmeat will approach the figure of 10,000 tons which has been quoted in the Press.

Veterinary obstacles to the import of meat from France have been overcome following an undertaking by the French representatives that no meat from animals situated within 20 kilometres of any outbreak of foot-and-mouth disease will be consigned to Britain, nor will any meat destined for this country be refrigerated in storage refrigerators used for French meat.

Animals will be slaughtered in special slaughterhouses for meat destined for Britain only, and inspections by veterinary representatives of this country will be permitted.

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ROYAL SOCIETY FELLOWS

Among the 25 new Fellows of the Royal Society elected on March 17th are the following: Dr. F. C. Bawden, head of the Plant Pathology Department at Rothamsted Experimental Station, Harpenden, distinguished for his work on plant viruses and virus diseases, and for important contributions to the study of virus serology; F. W. Rogers Brambell, Lloyd Roberts professor of zoology, University College of North Wales, Bangor, distinguished for his experimental studies of processes of reproduction in mammals and of the factors concerned in ante-natal mortality; Ernst Boris Chain, university demonstrator in chemical pathology, Oxford University, distinguished for his work on enzymes of snake-venom and bacteria, and especially for his researches on penicillin and other antibiotics; Edward David Hughes, professor of chemistry, University College, London, distinguished for his researches in the mechanism of the reactions of carbon compounds; Hedley Ralph Marston, chief of division of biochemistry and general nutrition, Commonwealth Council for Scientific and Industrial Research (University of Adelaide, South Australia), distinguished for his researches on nutrition and wool growth in merino sheep and on trace element deficiency diseases in ruminants; Walter Thomas James Morgan, research worker, Lister Institute of Preventive Medicine, reader in biochemistry in the University of London, distinguished for his contributions to the chemistry of immunology and blood groups; N. W. Pirie, head of the Biochemical Department, Rothamsted Experimental Station, Harpenden, distinguished for his researches on the chemical and physical properties of plant viruses; David Aylmer Scott, research member, Connaught Laboratories, University of Toronto, distinguished for his contributions to the chemistry of insulin, heparin and carbonic anhydrase; Wilson Smith, professor of bacteriology, University College Hospital Medical School, distinguished for his researches on the virus of influenza and on the pathology of staphylococcal infections; and Frank George Young, professor of biochemistry, University College, London, distinguished for his studies of the role of the hormones of the anterior lobe of the pituitary gland in carbohydrate metabolism.

* * * * *

IMPROVEMENT OF POULTRY STOCK

The Chick Producers' Association has drafted a scheme with a view to improving the poultry stock of the country. It aims at placing the whole of the onus for quality upon the hatcheries, who will have not only to maintain a high standard of efficiency themselves, but also to answer for the efficiency of the farms which supply them with eggs.

The draft scheme will be laid before the April meeting of the N.F.U. Poultry Committee and, if approved by that body, before the Minister's Advisory Committee immediately afterwards.

* * * * *

LEGAL NOTES

Action Over Pony's Age.—At Wellington (Som.) County Court Judge Pratt heard a claim for damages of £132 15s. by Capt. G. Bramwell, of Timewell House, Morebath, against Mr. Geoffrey Benton Fletcher, of Nynehead Stables, Wellington, for an alleged breach of warranty concerning a pony.

Plaintiff was represented by Mr. Mansell Reece, barrister, and defendant by Mr. P. E. G. Smith.

It was stated that Capt. Bramwell, wanting a pony fit for a children's show, saw defendant at his Nynehead stables about one. He accepted defendant's word that the pony "might be six years old" and bought the pony for £165. Later Capt. Bramwell discovered that the pony was nine or ten and was in foal. Defendant refused to take it back.

Mr. John Francis Fleming, horse dealer, Bagborough, gave evidence of his wife riding the pony, after which defendant agreed that it was in poor condition but could be schooled to make it fit for shows. Normally no-one would endeavour to school a pony at seven or eight years old. In his opinion the value of the pony was £100.

Major John F. Rankin, veterinary surgeon, of Minehead, said the pony was at least nine years old.

Defendant said he told Capt. Bramwell the pony was about seven years old and that it had only recently been broken.

Major J. de Pret Roose, of Oakfield House, Oake, who was stated to have judged horse shows at Olympia, said that age was no criterion in the training of any animal. Provided a horse was handled properly when it was young it could be schooled up to nine years of age.

Judgment was given for the defendant. Judge Pratt said in his opinion, plaintiff had not made known to the defendant the purpose for which he required the pony or that he was relying on his (defendant's) skill and judgment.

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Foreign Straw Not to be Used for Animals.—A case which a police officer stated was brought to court in the hope that it would get publicity was heard at Aberdare when John Arrowsmith, 66, was ordered to pay costs for bringing straw which had been used for packing purposes into contact with animals. Police-inspector Rowlands said it was known that many animals which had contracted foot-and-mouth disease had done so by the coming into contact with imported straw used as packing material. Packing material which had been imported should be destroyed or returned to the place it had come from to be used again. It was stated that Arrowsmith had gathered from an ash dip some straw which had been sent by local tradesmen to be burned, and had used it as bedding in a piggery. When Arrowsmith pointed out that he was unaware of any regulation governing the use of packing straw the stipendiary magistrate (Mr. J. Davies, K.C.) said, "I must admit that I, too, was unaware of any such regulation until to-day."

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

Foot-and-Mouth Disease:

Isle of Ely.—Eastfield, Four Gotes, Tydd St. Giles, Wisbech, Isle of Ely (Mar. 23rd); Silverwood Farm, Four Gotes, Tydd St. Giles, Wisbech (Mar. 28th).

Sheep Scab:

Lancs.—Robert Laithe Farm, Loneshawbridge, Colne (Mar. 22nd).

Yorks, W.R.—Far Fence End, Thornton-in-Craven, Skipton (Mar. 18th).

* * * * *

THE VETERINARIAN AND THE FARMER

The social gatherings of local Farmers' Clubs often make very happy media for promoting friendly liaison between members of the profession and agriculturists. We therefore devote a little space in this issue, by way of illustration of the way in which use can be made of such opportunities, to the address given by Major R. H. K. Davis, M.R.C.V.S., of Ilfracombe, when called upon at

short notice to replace a lecturer at a gathering of one of the most progressive of these West Country societies, the Lovacott and District (Devon) Farmers' Club.

Taking as his subject "Some Aspects of Veterinary Science," Major Davis said that to-day England was more dependent upon agriculture than ever in her long history, yet in cattle alone we lost £20,000,000 and 40,000,000 gallons of milk per annum, also over 500,000 calves every year, all due to abortion, mastitis and sterility, which in turn affected the nation's meagre rations to an enormous extent; this tragedy could be halved, were progressive farmers to adopt modern treatment.

Penicillin treatment was a great asset, but it was not a cure for every form of mastitis. In support of its discriminating use under the guidance of a veterinary surgeon, Major Davis instanced a herd of 150 T.T. cows, which were afflicted with mastitis. The farmer decided to dispense with the patent medicine bottle, and consult a veterinarian. This resulted in an increased milk production of 30,240 gallons in four years, approximately 200 gallons per cow; this could be regarded as a satisfactory decision by the farmer, who incidentally added to his banking account and was able to supply additional much needed milk. Sterility was another evil and when it reared its ugly head it caused a loss not only of calves, but extra food, when the cow was not in calf. Speaking of tuberculosis, it was emphasised that last year there were 2,000 deaths from tuberculosis of bovine origin, and it was urged that all farmers should become T.T. minded in order to eradicate the fearful scourge; the necessity for this was brought home to them by the fact that the American Army authorities during the late war prohibited their troops from drinking our raw milk, while they were stationed in this country.

Major Davis made an ardent plea for closer co-operation between the farmer and the veterinary surgeon, as their profession desired to be of service to the community by placing their training and experience at the disposal of all. In the past many farmers had used patent medicines, which of necessity did not apply to all cases, while others had listened to pedlars devoid of any qualification—in fact, they had not even seen the animals concerned. He suggested that it would be in the farmer's own interest as early as possible to call in a veterinary surgeon who would make a diagnosis, advise and if necessary prescribe. Further, his profession, as were doctors, should be regarded as friends of the family concerning the control of disease.

* * * * *

STERILITY IN BULLS IN SCOTLAND

Another Case for Data

"There is increasing evidence to indicate that the prevalence of sterility in bulls is tending to increase," observes *The Scottish Farmer* in its issue of March 12th, and continues: "Complaints on the score of bulls proving incapable of service or of being infertile are undoubtedly much more numerous than was the case several decades ago. Probably, in recognition of this increasing risk, a guarantee is now given at many of the sales in the south of Scotland in respect of all bulls of 12 months and over provided the defect is notified to the auctioneer within 60 days of the date of sale. This method appears to be a reasonably fair one for both buyer and seller and one well worth trial in a wider field, but unfortunately it has not been adopted at the larger sales of bulls of the beef breeds, although, of course, an exposer may furnish any warranty he may care to give. In the absence of such guarantee the buyer has no remedy against the seller should a purchased bull prove impotent or infertile. The trouble is not confined to bulls of commercial standard. It also crops up in animals realising thousands of guineas, and in such instances the loss may be heavy and serious, although relatively no more so than with the ordinary breeder who, as a rule, can ill afford to lose the greater part of the cost of a bull, and at the same time have his breeding time-table and programme upset with further consequential loss.

"Should these disabilities go on increasing, it seems highly probable that buyers of beef bulls will demand a warranty similar to that provided in respect of dairy bulls. But some trouble might eventuate in regard to bulls purchased in prime condition and returned for breach of warranty after spending a couple of months on a bare upland holding where 'keep' is meagre in both quantity and quality, with the result that the animal on return might be little more than a shadow of his former self. It would be interesting and informative to learn the experience of the Department of Agriculture in regard to sterility in bulls, for since the Department is the largest buyer of bulls, and since these are distributed to crofting townships in the Highlands and Islands, it is reasonable to assume that the official records must contain much valuable data relating to this matter; and although we are not aware of such information having been published at any time, it would be to the national interest to have all data bearing on the matter collated and made public. The question might usefully be raised by the National Farmers' Union or by the Royal Highland and Agricultural Society."

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CAMBRIDGE ESTATE FOR RESEARCH

The Cambridge Correspondent of *The Times* reports that Babraham Hall, about six miles from Cambridge, has been acquired by the Agricultural Research Council for a research station connected with the Institute of Animal Physiology at Cambridge University. Some 450 acres of land surrounding the Hall are included in the purchase, the whole being the property of Colonel Robert Adeane, who inherited the estate some six years ago from his father, who was Lord Lieutenant of Cambridgeshire for many years. Previously the Hall was one of the residences of a former Earl Cadogan.

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THE B.R.X. CLUB

Absent friends may be interested to hear that the third annual general meeting and dinner of the B.R.X. Club was held at the Royal Veterinary College, on Friday, March 11th, when 75 members and their guests spent a most enjoyable evening. The President (Dr. C. W. Ottaway) was in the chair and Professor E. C. Amoroso was the guest of honour.

The B.R.X. Club was formed by ex-members of the Holme Park (Sonning), Berkshire Home Guard, its objective being the holding of an annual reunion dinner. The name is taken from the shoulder flash of the Berkshire Home Guard. Under the constitution of the Club any member may invite two guests, but all guests must be past or present students of the Royal Veterinary College. Having once attended an annual general meeting and dinner, each guest automatically becomes a member. Future activities of the Club will be announced in these columns. The Secretary is Mr. A. S. King, Royal Veterinary College, N.W.1.

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Holding that a locked car was not a receptacle within the meaning of the word as used in paragraph 4 (2) of the Dangerous Drugs Regulations, 1948, the Birmingham stipendiary magistrate (Lord Ilkeston) fined a doctor £5 for failing to keep dangerous drugs in a locked receptacle. The doctor's car had been stolen and when it was recovered an open leather case containing dangerous drugs was found on the rear seat. Lord Ilkeston agreed to state a case.

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Scotland will soon have its second A.I. centre—at Craibstone, Aberdeen. The centre is chiefly for the dairying industry, but later on a beef service will be provided.

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

Correspondents are requested to write as briefly as possible.

NIGHT VETERINARY SERVICES IN THE METROPOLITAN AREA

Sir,—Each Metropolitan veterinary surgeon has some thousands of clients, whom he has endeavoured to train to contact him from 8.30 a.m. to 6.30 p.m.

The animal societies treat thousands of animals weekly; and from 6 p.m. to 9 a.m. Monday to Friday, noon Saturday to 9 a.m. Monday, and all the bank holidays, a proportion of these cases are thrown on the 'phones and surgeries of the Metropolitan veterinary surgeon; consequently, every night, he not only has to contend with his own clients but also those of the societies.

After some years, depending on the stamina of the M.V.S., he is, reluctantly, compelled to stop answering the 'phone or surgery door, in order to avoid a breakdown in health, and the risk of not being able to practise at all.

Is it fair to the societies' clients, that their animals should have treatment only in "office hours" and so be compelled to overwork the M.V.S. nightly; thus preventing him from carrying out the "elementary rules of conduct" to his own clients?

As for examples—last Sunday, after completing my own work, from 1.30 p.m. the societies' clients arrived with a smooth haired fox terrier (fractured radius and ulna); cat (influenza); rough

haired fox terrier (3 in. lacerated wound upper lip); airedale (contused scapula); and finally, the police at 8.30 p.m., with a road accident, to a terrier (broken jaw).

Any veterinary surgeon practising for six to twelve months in the Metropolitan area, could accumulate a bookful of complaints against the animal societies, and would soon realise that the blame for lack of veterinary night services can be justifiably laid at the door of the societies.

Yours faithfully,

272, Dollis Hill Lane, T. B. McClure.
Cricklewood, N.W.2.

. . . . . .

Sir,—Mr. R. C. G. Hancock's letter of March 10th has called forth, from Miss Joshua and Mr. Geffen, replies which, I feel sure, all veterinary surgeons in general practice in large towns or cities will welcome as fully justified in the light of their own experiences.

The "letter on the subject expressing the concern of the officials of the N.V.M.A." did, in fact, reach the Central Veterinary Society. This Society appointed a sub-committee which examined and reported on the matter. This report * was accepted by the Council of the "Central" and included in the minutes, and should have been submitted to Headquarters, N.V.M.A. There has, apparently, been considerable delay in publishing this report, but I should be very pleased to see its appearance in the very near future.

Before making further comment, I would ask Mr. Hancock to state:—

(1) The number of R.S.P.C.A. clinics in the Metropolitan area.
(2) The hours at which veterinary surgeons are available at these clinics.
(3) The number of veterinary surgeons employed in a whole-time capacity by the R.S.P.C.A., their normal hours of duty, and the extent to which they are available for emergency service at night and on Saturdays, Sundays and public holidays.

Yours faithfully,

183, Upper Richmond Road, T. L. Wright.
Putney, S.W.15.
March 26th, 1949.

* This report recently has been received at Headquarters.—Editor.

. . . . . .

Sir,—I would like to use your correspondence column to reply to Major Hancock's letter regarding veterinary services in London.

In our practice there has always been a day and night service. Two veterinary surgeons reside on the premises. Such service is made use of fairly frequently by our surrounding police stations.

If the R.S.P.C.A. telephoned here on the date mentioned an answer would have been obtained as the telephone is never left day or night. If no veterinary surgeon was present, as may happen, the delay in returning from a case could not have been long.

After surgery cases are not encouraged but any real illness or accident receives attention. Should one of us not be free to go out, the case is always given the option of being brought to us.

No form of roster has been mentioned within my knowledge, but the R.S.P.C.A. made enquiries if we would be available in an emergency.

I would like to mention that I have read somewhere recently and I believe heard a broadcast about the R.S.P.C.A. ambulance and an all-night service. Certainly on one occasion an R.S.P.C.A. ambulance brought a case here for attention. Is this service still available?

If it has been discontinued its revival by the R.S.P.C.A. would solve the problem in being able to transport any case quickly to the nearest available veterinary surgeon. Such a service would not be practicable to a private practitioner.

Yours faithfully,

25, Craven Terrace, G. F. Widden.
Lancaster Gate, W.2.
March 22nd, 1949.

. . . . . .

Sir,—I resented strongly the remarks made by Mr. Hancock concerning the willingness of veterinary surgeons to do night work, but did not record my objections earlier because I thought that someone else would be able to do it with more ability, and I would like to say that Miss Joshua has done so in very plain language, and I heartily agree with her remarks.

I have never yet refused to go out at night for an urgent case but expect I have lost many clients because I have refused to go at 9 o'clock at night, as Mr. Geffen points out, to cut a dog's toe nails, and I feel I am well off without them.

Mr. Hancock abuses the veterinary profession for not attending to an urgent case sponsored by the R.S.P.C.A.; surely if Mr. Hancock felt so strongly about the matter, he could have saved the profession's reputation by attending the case himself, or was his telephone one of those that was unanswered?

Yours faithfully,

230, South Street, Sidney S. Nye.
Romford.
March 26th, 1949.

. . . . . .

Sir,—May I refer to Mr. Hancock's letter in your issue of March 19th.

The Hospital of Our Dumb Friends' League has been open, under veterinary control, since 1904 through two world wars during which its doors were never closed. A veterinary surgeon is always on duty night and day and can be reached within a very few minutes of an accident case being brought to the hospital.

The facilities, unfortunately, do not extend to collections, but anyone whose animal has been injured and who is unable to afford to reach the hospital may charter a taxi, for which the League pays.

There has been no variation of this service to the public for many years.

Yours faithfully,

Our Dumb Friends' League, E. Keith Robinson.
Grosvenor Gardens House, *Secretary*.
Victoria,
London, S.W.1.
March 22nd, 1949.

* * * * *

Sir,—With reference to Mr. Hancock's letter of March 10th, the first thing that strikes one is, why doesn't he do these jobs himself, assisted by the Society's whole-time veterinary surgeons?

I am quite certain that no one understands taking the rough with the smooth better than the veterinary surgeon. Therefore why should the private practitioners take only the rough to bolster up the Society propaganda? These cases are not the clients of the general practitioner, therefore the first paragraph does not apply: strictly speaking they are Mr. Hancock's clients. An organisation like the London Airport should appoint their own veterinary surgeon from the district.

Yours faithfully,

March 22nd, 1949. Onlooker.

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Sir,—I am sorry to have to join issue with my friend and colleague Mr. Hancock on the matter he has raised. It is easy for one who is not in practice to tell those who are, that they ought to be ready to turn out at all times of the night, Sundays and Bank Holidays. I, personally, generally find that my working day is one of about 14 hours, and when finally I get to bed about 11 or 12 o'clock at night, I am dog-tired and in need of some rest to meet the turmoil of the following day. My experience, over the long years, coincides with that of your other correspondents—Miss Joshua and Mr. Geffen—who state that the person who clamours for attention out of hours is (1) not a known client, (2) one who has had a dog ill for some days, and could have called earlier, (3) one who has given proprietary powders in the hope of curing the animal without further trouble and expense, (4) one who has left the matter all day until he or she has returned from work, and who consequently has been suiting his or her own convenience, or (5) one who has magnified a trivial matter into one of grave emergency.

I can quote very numerous instances of injustice, thoughtlessness, selfishness, or crass ignorance, concerning people (quite unknown to me) who have rudely intruded upon my hours of leisure or sleep without one iota of justification. At 8 o'clock on Good Friday morning of last year I answered a telephone enquiry as to whether I could board a cat two months later. At 9 o'clock on the following Sunday morning I answered the telephone to a person who thought his dog had tapeworm. Three weeks ago, at midnight, somebody 'phoned and said he had got my name from the police (having tried to get seven other veterinary surgeons) and thought his dog was probably sickening for distemper as it had diarrhoea and a cough. These, and countless others like them, are a very fair sample of the "emergency" calls which are received throughout the year, and the practitioner is at length obliged to lay down a rule that he will not attend any but the cases of grave emergency on Sundays, holidays and at night.

Many of such urgent cases would go to the free-treatment centres, if they happened on a week-day, and in working hours; but if these clinics are closed, then the veterinary surgeon is sought out. I work very hard, and after 37 years in practice I feel that I cannot keep at work by day and by night—especially when it is palpable that I am being made a convenience, because the regular attendant is "out of town." In my area it seems that every veter-

inary surgeon is out of town on a Sunday or after midnight, and I find that my door bell and telephone really get busy at such times. Truly one has comparatively a very short spell on earth, and it seems extraordinary folly to work to the point of nervous breakdown. Who cares? Are there any medals for being up half the night, night after night? Do the animal owners ever feel or express one iota of gratitude? I, and probably all of my colleagues, do feel that where we know we are rendering a humane service to some poor injured animal, we are amply repaid even without a fee. But I am sure we resent pandering to the pure convenience and/or stupidity of people who often care far less than we.

I will attend on Christmas Day, Bank Holidays, Easter Sunday and Monday, and at other off-duty times, all dogs which have pups, fall out of windows, or are run over, etc., and cats with cystic calculus—all of which habitually occur on those days, but I refuse to be bothered about worms, discharging noses, or skin irritations, etc., etc., or to discuss the boarding of animals some days or weeks hence. To-day (Sunday, March 27th) at 4 in the afternoon, when I was enjoying a quiet siesta, the knocker was banged and the bell rung furiously for a good three minutes. I woke and got to the door only to be asked if I could board a dog for a few hours.

If the charitable organisations (which derive their sustenance from public donations) desire that a 24-hour, 365-day service is necessary, then let them employ whole-time veterinary surgeons and provide it. Veterinary surgeons should not be made martyrs or slaves in consequence of popular clamour or ill-conceived sentiment.

Yours faithfully,

H. Kirk.

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Night Veterinary Services Generally

Sir,—I entirely agree with Major Hancock's views regarding ourselves and those often very irksome night duties. Although I have been on the retired list for 23 years, I still like to think that we do our best to serve our clients day and night, Sundays and weekdays.

For instance: recently our Inspector at Okehampton had a 'phone call from the police saying a motorist had knocked over a moor pony, which had strayed on to the road, and broken its leg. Although it was nearly midnight, he, of course, drove his van to the scene of the accident and found the animal badly bruised with a serious wound. He 'phoned an Okehampton veterinary surgeon who, without hesitation, motored over and, by means of a flash lamp sutured the extensive wound. They then managed to get the animal into the van, conveyed it to a neighbouring farm and next morning found the owner.

Sometimes, perhaps, we may be even too conscientious. During the first world war, when I was trying to do the work previously done by three of us in West Cornwall, a lady visitor from the Midlands consulted me regarding a very old and infirm pet dog. For a whole week I tried to persuade her that the most merciful treatment was to allow me " to put him to sleep." Then, at 3 o'clock one morning, she 'phoned to say that she had decided to follow my advice! And I was, perhaps, foolish enough to turn out and motor to her house, tired and overworked as I was.

I sometimes think it would do some of our young graduates much good to have just one week's experience of doing all the work with horses, not forgetting the macadamised roads when steam rollers were almost unknown outside the towns!

Yours faithfully,

R. Glave Saunders.
(Hon. Secretary, Exeter, East and West Devon Branch, R.S.P.C.A.)

Exmouth,
March 23rd, 1949.

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THE "OPEN" COLUMN

Sir,—The danger of opening the columns of *The Veterinary Record* to all types of correspondence is exemplified in the unfortunate publicity which has ensued and which affects the whole of the profession following the appearance of a recent letter relating to the provision, of night services in the Metropolitan area. The use made of this correspondence in the National Press has, in my view, been of some detriment to the profession and is indicative of the need for very careful selection of the subjects to be discussed in the columns of the *Record*.

The supplement provides full scope for such communications and for any discussion which may emanate there from. In view of the fact that it is issued to every member of the Association there is no justification for suggesting that the publication of letters in the supplement in any way inhibits free discussion within the profession. Publicity outside the profession on such matters should be in accordance with the full facts of the case and where it is merited in line with Association policy, and not a one-sided view elaborated as a result of reading a letter expounding the particular problem, however well considered by the member concerned.

We should ensure that the good work performed by our President and the Public Relations Committee in achieving desirable publicity for the profession in the National Press and in promoting cordial relationship with many outside bodies, including charitable animal societies, is not impeded by such unfortunate occurrences, knowing full well that the columns of the *Record* itself are available for perusal by all and sundry.

Yours faithfully,

G. N. Gould.

12, Landguard Road,
Southampton.
March 28th, 1949.

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Conditions of Employment of Veterinary Assistants

Sir,—Whilst fully agreeing with your correspondent, R. W. M. Gover, that where possible correspondence columns of *The Veterinary Record* should be an open forum, his letter discussing the subject and commenting on the President's letter in your issue of March 12th, impresses one only by virtue of its lack of good taste and the complete ignorance of its writer with regard to the circulation of *The Veterinary Record*, and the confidential nature of its supplement.

It is a fact that the *Record* has a very wide circulation outside the profession. It is circulated to several libraries and institutions and is read by many members of allied sciences, animal welfare societies and unqualified practitioners, and others whose attitude towards the profession is very much less friendly. For that reason, matters of a purely domestic nature are usually published in the supplement.

The Officers of the Association have been embarrassed in the past by the failure of members to appreciate that the supplement is indeed confidential.

As regards the matter under dispute, no one has more sympathy than myself with the young graduate and with their determination to work under favourable conditions, but has it not occurred to Mr. Gover that the vast majority do so, and has it not occurred to him how undesirable it would be to allow a small vocal minority to give the impression to people outside the profession that assistants by and large are badly paid and overworked? Were such erroneous impressions to be gained by outside bodies, the association's efforts to ensure reasonable conditions of service for those not in general practice but employed by public bodies would be sadly undermined.

This whole question has been, and still is under review by the Home Appointments Committee who received a deputation from the Association of Veterinary Students at one of their recent meetings, and conceded nearly every point asked for.

It would seem scarcely appropriate to make reference to secret societies because our President, by virtue of his knowledge and experience, deems it undesirable that certain entirely domestic matters should be discussed in the open coloumns.

Yours faithfully,

L. Guy Anderson.

49, Cambridge Street,
Aylesbury,
Bucks.
March 21st, 1949.

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Sir,—It would seem that the Council of the N.V.M.A. were technically correct in restricting the correspondence on the conditions of employment of assistants to the columns of the supplement.

It must be emphasized, however, that, however much we may deprecate the fact, the supplement, in its present form, does not receive anything like the attention given to the *Record* itself. The long intervals at which it is published do little to encourage the discussion of any of the subjects mentioned within it, and, as has been stated already, it is not readily available to students.

Under these circumstances it is surely unwise to relegate to the supplement any subject which is of concern to any one section of the profession—especially a topic which is likely to involve a sense of grievance. Such an action cannot fail to lead to charges of repression.

One trusts that these are completely without foundation, but, pending a revision of the nature of the supplement, as suggested by Mr. H. Williams Smith, one's uneasiness on this point can only be stilled by allowing this subject to be discussed in the open columns of the *Record*.

Yours faithfully,

E. A. Gibson.

11, Brook Crescent,
Chingford, E.4
March 19th, 1949.